PATENT ABSTRACTS OF JAPAN

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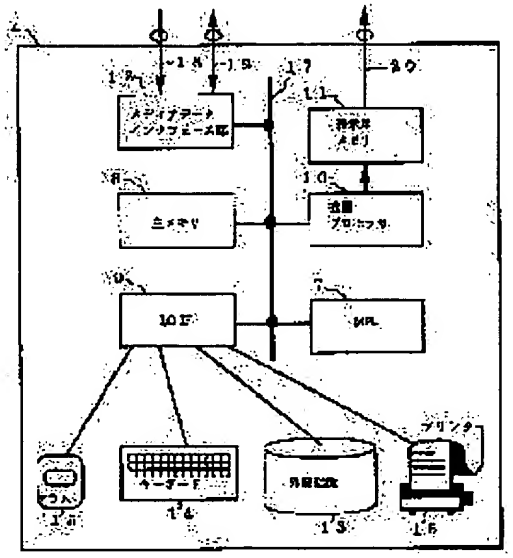
(54) RECEIVING INFORMATION STORING TYPE TELETEXT RECEIVER

(57)Abstract:
PURPOSE: To output the desired data at the desired time in an easy-to-see form by comparing the data such as character information with the profile setting information when the data such as the character information to be sent as a broadcasting signal are received and storing the equal data in a memory when there are the data equal to the content of the setting information.
CONSTITUTION: From a receiving signal, a TV signal and a character signal are separated, and the character signal is inputted to a media data processing part 4. The processing part 4, in accordance with the program performed by a micro processor 7, compares the profile setting information stored in an external memory 13 with the receiving data at a media data interface part 12, and when there are the data of the content equal to the setting information, stores them in the device 13. Subsequently, the stored data are suitably read, the rearrangement of the data and the change of the hierarchical constitution are performed, a document is prepared and outputted to a printer 16. Thus, the desired data can be outputted in an easy-to-see form.



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CLAIMS

[Claim(s)]
[Claim 1] In the broadcast receiving set which receives a broadcast signal including the teletext signal multiplexed at the vertical-retrace-line period of a television signal A profile storage means to memorize profile setting information, and an information selection means to search for the information which suited it from the reception broadcast signal based on said setting information memorized by said profile storage means, The receipt information are recording means which carries out sequential are recording of the information searched for with said information selection means, and goes, The teletext receiving set characterized by having a document generation means to take out specific information out of the information accumulated in said receipt information are recording means, and to perform new document generation, and the document output means which outputs the document generated with said document generation means.
[Claim 2] It is the teletext receiving set according to claim 1 which said profile storage means stores the keyword list which consists of a specific keyword and its significance, and is characterized by said information selection means being what searches for the information which corresponds to it based on said keyword at least out of a reception broadcast signal.
[Claim 3] It is the teletext receiving set according to claim 1 which said profile storage means stores the classification code list which consists of a specific classification code and its significance, and is characterized by said information selection means being what searches for the information which corresponds to it based on said classification code at least out of a reception broadcast signal.
[Claim 4] Said document generation means is a teletext receiving set according to claim 1 characterized by performing document generation which defines the arrangement in a document about the information accumulated in said receipt information are recording means according to the sequence of the significance which the sequence [over the selection condition added to said information / of significance] or broadcasting station side set up.
[Claim 5] Said document generation means is a teletext receiving set according to claim 1 characterized by performing document generation which summarizes the information on the contents related so that it may be legible at the time of a screen display, and is carried out to a hierarchical configuration about the information accumulated in said receipt information are recording means.
[Claim 6] Said document generation means is a teletext receiving set according to claim 1 characterized by supplying the generated document to said document output means according to the time interval which was again accumulated in said receipt information are recording means, or was specified.
[Claim 7] For said document generation means, the contents of information are the teletext receiving sets according to claim 1 characterized by performing deletion, informational reclassification, and marking of the information outputted with the document output means a part about the information accumulated in said receipt information are recording means.
[Claim 8] Said document generation means is a teletext receiving set according to claim 1 characterized by having the function to delete what passed over storage limitation, and the thing specified by a user about the information accumulated in said receipt information are recording means, or the generated document.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application] This invention relates to the teletext receiving set which receives a broadcast signal including the teletext signal multiplexed at the vertical-retrace-line period of a television signal, and relates to the receipt information are recording mold teletext receiving set which can extract alternatively the data which a user needs from multimedia data especially sent as said teletext signal, such as text and static-image information.
[0002]
[Description of the Prior Art] What is generally multiplexing and broadcasting text etc. to said television signal within the vertical-retrace-line period of the television signal broadcast as a teletext system is known.
[0003] And if it is in the teletext receiving set used for this kind of teletext system In data, such as text received, it not only receives a teletext signal, but If the data of the contents which the user specified the specific keyword and agreed in said keyword in data, such as said text received, are contained in order to extract and keep only the data which a user needs The teletext receiving set of the information gathering mold extracts the data alternatively and it was made to keep it came to be developed.
[0004] By the way, the following can be mentioned as a teletext receiving set of the recently developed information gathering mold. The 1 is indicated by JP,61-285881,A. A user sets up a desired program name and a desired keyword, and if there is a program which was in agreement with said program name in data, such as said text received, the program information will be memorized to a reception file. Moreover, if the keyword which was in agreement with said keyword is in data, such as said text received, the image corresponding to that information is read from an image file, and it is made to display this image with data, such as text. The 2 is indicated by JP,62-185482,A. The reservation program and the non-reserving program are beforehand defined in data, such as text received. It memorizes immediately in the memory specified when data, such as said received text, were said reservation programs. Only when it accumulates, and data, such as said received text, are said non-reserving programs and an opening is in said memory, as storage and are recording are performed, it is made to lessen the latency time of the program which a user wants to watch. Although indicated by JP,63-13483,A, in addition, like Keyword ****** which the user set up the desired keyword and was in agreement with said keyword in data, such as text received, The thing make store data, such as text, temporarily in memory, reads after that data, such as said text made to store temporarily, one by one, and it was made to display, Although indicated by JP,2-41086,A and JP,2-41087,A, moreover, in the brand contained in the displayed stock price program like It is what registers as a brand which should accumulate what was specified with cursor, will accumulate it in memory if there are stock price data of said registered brand which is contained in a stock price program in data, such as text received, after it, and processed this stored data suitably.
[0005]
[Problem(s) to be Solved by the Invention] However, the above-mentioned conventional information storage mold teletext receiving set Data, such as text corresponding to the program for which a user asks in data, such as received text, Data, such as text which has the keyword for which a user asks, are obtained alternatively. Since data of what can be displayed suitably, such as said text, are what is memorized by memory etc. and is only accumulated in it in the form as it is after memorizing and storing up data, such as these text, in memory etc., The user has the problem that it is very difficult for a user to receive only required data in a legible form when required, out of data, such as said many of text which is memorized by said memory etc. and accumulated in it.
[0006] This invention is for removing such a trouble, and the purpose is in offering the information storage mold teletext receiving set with which a user can receive only the data which a user needs in a legible form when required out of data, such as huge text sent as a broadcast signal.
[0007]
[Means for Solving the Problem] In the broadcast receiving set which receives a broadcast signal including the teletext signal with which this invention is multiplexed at the vertical-retrace-line period of a television signal in order to attain said purpose A profile storage means to memorize profile setting information, and an information selection means to search for the information which suited it from the reception broadcast signal based on said setting information memorized by said profile storage means, The receipt information are recording means which carries out sequential are recording of the information searched for with said information selection means, and goes, The means which consists of a document generation means to take out specific information out of the information accumulated in said receipt information are recording means, and to perform new document generation, and a document output means which outputs the document generated with said document generation means is provided.
[0008]
[Function] If data, such as text sent as a broadcast signal, are received in a receive section, first, the comparison with profile setting information is performed, the data will be extracted immediately and these data will be memorized by memory, if there are data of the contents which were in agreement with said profile setting information in the comparison. Next, after said data memorized by this memory are read suitably, document generation of the display of the data which modification of two or more data list substitute and

each data-hierarchy-configuration and printing of rearranged two or more data were performed, and made a change of a hierarchical configuration, registration of rearranged two or more data or the data which made a change of a hierarchical configuration, etc. is performed.
[0009] Thus, since it only carries out a selection extract and this invention not only is storing data, such as text for which a user asks, but is performing the above document generation about said data after this are recording, a user can make said desired data (generated document) output at the time of a request out of said said stored data (generated document) in the form which a user tends to read.
[0010]
[Example] Hereafter, the example of this invention is explained using a drawing.
[0011] Drawing 1 is the block diagram showing the whole teletext receiving set configuration concerning this invention.
[0012] For the signal separation section and 3, as for the media data-processing section and 5, in drawing 1 , the image processing section and 4 are [1 / an antenna and 2 / a display and control section and 6] displays.
[0013] And an antenna 1 receives a television broadcasting signal and a teletext signal, and the signal separation section 2 separates the television signal and alphabetic signal in an input signal. The image processing section 3 possesses all the main components of the usual television signal receiver, and processes the inputted television signal. The media data-processing section 4 processes multimedia signals, such as an inputted alphabetic signal. A display and control section 5 carries out synthetic processing of the signal from the image processing section 3 and the media data-processing section 4, and a display 6 displays the inputted signal.
[0014] The outline of actuation of said teletext receiving set is as follows.
[0015] If a broadcast signal is received in an antenna 1, this reception broadcast signal will be supplied to the signal separation section 2, and will be divided into a television signal and an alphabetic signal there. Among this, in the image processing section 3, separation of a Horizontal Synchronizing signal, a Vertical Synchronizing signal, a sound signal, etc., etc. is performed, and a television signal is changed and outputted to the signal suitable for a display. Moreover, processing which is described below in the media data-processing section 4 is performed, and an alphabetic signal is similarly changed and outputted to the signal suitable for a display. The output signal of the image processing section 3 and the media data-processing section 4 is independently compounded in a display and control section 5, and is supplied to a display 6, and a necessary display is performed there.
[0016] Next, drawing 2 is the block diagram showing an example of the internal configuration of said media data-processing section 4.
[0017] drawing 2 — setting — 7 — a microprocessor (MPU) and 8 — main memory and 9 — an input/output interface (I/OIF) circuit and 10 — a drawing processor and 11 — for external storage and 14, as for a mouse and 16, a keyboard and 15 are [the memory for a display, and 12 / the media data interface section and 13 / a printer and 17] control buses.
[0018] And a microprocessor 7, main memory 8, the input/output interface circuit 9, the drawing processor 10, the memory 11 for a display, and the media data interface section 12 are combined through the control bus 17, respectively, and the media data interface section 12 is combined with the image processing section 3 through the signal separation section 2 and Rhine 19 through Rhine 18, respectively. Moreover, the memory 11 for a display is combined with a display and control section 5 through Rhine 20, and external storage 13, the keyboard 14, the mouse 15, and the printer 16 are combined with the media data interface section 12.
[0019] Although this media data-processing section 4 performs the following actuation, according to the already defined program, a microprocessor 7 performs these actuation.
[0020] Main memory 8 is constituted by RAM which consists of volatile semiconductor memory etc., and stores temporarily said program and program reference data which a microprocessor 4 performs. The input/output interface circuit 9 transmits the data of a control bus 17 to external storage 13, or transmits the data from external storage 13 to a control bus 17, and also it transmits a keyboard 14 and the input data from a mouse 15 to a control bus 17, and makes the data of a control bus 17 transmit to a printer 16. The drawing processor 10 generates the status signal displayed on a display 6. Memorandum ** 11 for a display is constituted by RAM which consists of volatile semiconductor memory etc., and it sends out a status signal to a display and control section 5 through Rhine 20 while it writes in the status signal generated by the drawing processor 10. The media data interface section 12 receives the alphabetic signal from the signal distribution section 80 through Rhine 18, and changes the signal into the thing of the data format in which digital processing is possible. The media data interface section 12 exchanges control information for coincidence between the image processing sections 3 through Rhine 19. Furthermore, external storage 13 is constituted by the magnetic disk which is the storage of a non-volatile, performs said program which a microprocessor 7 performs, and storing of said program reference data, and further, it performs storing of various kinds of data or a document so that it may state below. The direct input of the information as which a user specifies a keyboard 14 was carried out, and the mouse 15 is equipped with one or more carbon buttons.
[0021] Drawing 3 is drawing showing the software configuration of the system which a microprocessor 7 performs, and explains actuation of said media data-processing section 4 in more detail using drawing 3 .
[0022] drawing 3 — setting — 21 — an operating system and 22 — for the received-data Monitoring Department and 25, as for the report Management Department and 27, a data takeoff connection and 26 are [the common graphic section and 23 / the profile data Management Department and 24 / document falsework and 28] the documentation-management sections, this software configuration is constituted by these program groups, and these programs group is stored in external storage 13.
[0023] First, an operating system 21 manages the resource of the program group built in a system, main memory 8, and external storage 13 grade, and controls signal processing of the media data-processing section 4 whole. Since this operating system 21 very thing is generally known well, the detailed explanation beyond this is omitted.
[0024] Next, the common graphic section 22 offers the graphic function used in common in said program group, and the I/O function between a mouse 15 or keyboard 14 grade, respectively. Since the graphic operation which this common graphic operation section 22 performs is generally also known well, the detailed explanation beyond this is omitted.
[0025] Subsequently, the profile data Management Department 23 manages the profile configuration file created based on the profile which a user sets up according to an individual. Receipt storage of the profile configuration file created here is carried out at external storage 13, and the following contents are set to the profile configuration file. That is, one of them is a data list for specifying the information chosen from the received information, and one which this will consist of a keyword list and a classification code list, and will

accept it the inside is the format specification for outputting as a document. In addition, in here, the element of **** with which each of said keyword lists and said classification code lists constitutes these lists consists of a keyword, its significance and a classification code, and its significance.

[0026] then — the case where the information which the received-data Monitoring Department 24 was monitoring continuously whether the information which agreed by the contents of said profile configuration file using the media data interface section 12 was received, and agreed by said contents is received — the media data interface section 12 — the notice of incorporation of said information is performed to the report Management Department 26 in response to the notice.

[0027] Next, if the notice of incorporation of said information is received from said received-data Monitoring Department 24, the report Management Department 26 incorporates said information, classifies said information into the contents which agreed by the contents of said profile configuration file as one report, and stores this in external storage 13. Moreover, the report Management Department 26 also performs management of the report which is memorized by external storage 13 and accumulated in it, and functions, such as deletion of a report, marking of the report outputted as a document, and reclassification of a report, hit this as management of the report in this case. In here, the report set as the object of said deletion is selected based on the following criteria. That is, what exceeds the storage limitation of a non-outputted report about the report (non-outputted report) to which that to which the 1 exceeds the storage limitation of an outputted report about the report (outputted report) already outputted as a document, and its 2 are not yet outputted as a document, and its 3 are the reports the user instructed deletion to be. In addition, he is trying for how to set said storage limitation to become long according to the significance (which of the significance in which the user did a selection setup, and the significance set up by the broadcasting station side, or the higher one) of a report, and a setup and storage limitation of this significance are specified with the parameter in the case of system construction.

[0028] Subsequently, the document falsework 27 makes a printer 16 supply and print out the document which extracted the report incorporated by the report Management Department 26, generated this in the document according to the format set as the profile configuration file, and was generated here if needed. Generation of this document may be performed when a report which fulfills the conditions of a setup chosen specially has been sent, when setting and performing a fixed time interval periodically, and the conditions of said setup chosen specially are set up by the profile configuration file. When a report which fulfills the conditions of a setup which starting of processing of generation of said document was performed by only the passage of time, and was specially chosen when a fixed time interval was periodically set and performed in here has been sent and it performs, the media data interface section 12 detects formation of the conditions of said setup, and generation is performed in said document by transmitting the detection result to the document falsework 27.

[0029] Finally, the documentation-management section 28 registers the document generated by the document falsework 27 as a document which should carry out a documentation management if needed, and functions retrieval of a document, the already registered ejection of a document other than memorizing and accumulating in external storage 13 according to a demand of a user.

[0030] Drawing 4 shows the configuration of the teletext signal multiplexed within the vertical-retrace-line period of a television signal, as for the signal, the data for one frame consist of combination of a header unit 29 and a body part 30, and broadcast transmission of two or more data is carried out by the repeat of this combination. By the way, ****** and the body part 30 by which data, such as significance of the data set up by the classification code, keyword, and broadcasting station side and the die length (byte count) of a body part 30, are contained in the header unit 29 of this signal are ****** in which it is divided into two or more subblocks, and that die length, the format of data, and the stereo of data are included for every subblock.

[0031] Next, monitor processing of the received-character signal performed in the hardware of said media data interface section 12 is explained using the flow chart of drawing 5 .

[0032] In introduction and step 31, the classification code and keyword which were set up by the profile configuration file are taken out, they are set to the media data interface section 12, and monitor processing is initialized. The check of each of said frame within the continuing alphabetic signal which the media data interface section 12 received in step 32 is repeated, and is performed. Moreover, in step 33, the media data interface section 12 digitizes the alphabetic signal inputted through Rhine 18, and investigates whether the classification code or keyword which is in agreement with the classification code or keyword set as the header unit 29 in the frame of this alphabetic signal at said processing step 31 exists. If the frame corresponding [a keyword's / a classification code or] is detected at this time, it shifts to step 34, and in step 34, the media data interface section 12 will notify the congruous purports to a microprocessor 7, and will end this processing.

[0033] Then, the processing which stores as a report the necessary data in the input signal performed at the report Management Department 26 is explained using the drawing 6 flow chart.

[0034] In introduction and step 35, the report Management Department 26 will receive the conditions of a setup which agreed with the data in this frame from the media data interface section 12, if the notice of the coincidence in said step 34 is received. Then, the report Management Department 26 investigates whether the folder which stores the data corresponding to the conditions of said setup exists in external storage 13. At this time, when said folder does not carry out, it shifts to step 37, and in step 37, the report Management Department 26 generates the folder which stores said data in external storage 13. Next, in step 38, the report Management Department 26 adds attribute information for the received data as one report, stores this in said corresponding folder of external storage 13, and ends this processing.

[0035] In this case, information, such as a flag which shows that it is output ending as the significance of the report which the user specified on condition that the setup as attribute information added to said report, the significance of the report which the broadcasting station side set up, a date, and a document, corresponds to this.

[0036] Next, output processing, such as document generation performed by the document falsework 27 and printing, is explained using the drawing 7 flow chart.

[0037] In introduction and step 39, the document falsework 27 determines sequence of a report. In this case, although the decision of the sequence of a report is made using either of three approaches shown below, it comes to be able to perform decision of the sequence of a report in the combination of these three approaches by determining the priority of application between these three

methods collectively. That is, the 1 is the approach of setting up sequence of a report in order of the significance set as the profile configuration file, the 2 is the approach of setting up sequence of a report in order of the significance set to the report itself, and the 3 is the approach of setting up sequence in order of the date set as the report. In continuing step 40, the document falsework 27 determines format of the document outputted. In this case, the decision of the format of a document is made according to the format set as the profile configuration file, and can perform not only when printing by the printer 16, but assignment of the format in the case of displaying on a display 6. And in the display of a display 6, it is desirable to constitute a related report hierarchical in outline processor, and to make it a format which is legible. Next, in step 41, the document falsework 27 performs document generation by casting. Here, according to the format set up in said step 40, a report is taken out in order of the report determined in said step 39, casting is performed, a document is generated, and an outputted flag is made into truth about the taken-out report. Subsequently, in step 42, the document falsework 27 outputs the document to a document output unit. Here, if there are output directions to a printer 16, the document generated in said step 41 will be supplied to a printer 16, and printing will be performed [then,], for example. On the other hand, if there are output directions to a display 6, the document similarly generated in said step 41 will be supplied to a display 6, and a display will be performed there. In addition, when there are no directions to a document output unit, said step 42 is not performed. Subsequently, in step 43, the document falsework 27 registers a document. In this case, when document registration is specified in the profile configuration file, registration is performed in the documentation-management section 28 as delivery and a document which should be carried out a documentation management in the document generated at said step 41, and this processing is ended.

[0038]

[Effect of the Invention] According to this invention, the selection extract only of the data which a user needs out of data, such as text sent as a teletext signal, is carried out automatically. Storage, It accumulates. Further about the data of these many stored Two or more data list substitute, Since it is made to perform document generation of the display of the data which modification of each data-hierarchy-configuration and printing of rearranged two or more data were performed, and made a change of a hierarchical configuration, registration of rearranged two or more data or the data which made a change of a hierarchical configuration, etc. A user has the effectiveness of the ability to make said desired data (generated document) output in the form which a user tends to read at the time of a request out of said said stored data (generated document).

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TECHNICAL FIELD

[Industrial Application] This invention relates to the teletext receiving set which receives a broadcast signal including the teletext signal multiplexed at the vertical-retrace-line period of a television signal, and relates to the receipt information are recording mold teletext receiving set which can extract alternatively the data which a user needs from multimedia data especially sent as said teletext signal, such as text and static-image information.

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PRIOR ART

[Description of the Prior Art] What is generally multiplexing and broadcasting text etc. to said television signal within the vertical-retrace-line period of the television signal broadcast as a teletext system is known.
[0003] And if it is in the teletext receiving set used for this kind of teletext system In data, such as text received, it not only receives a teletext signal, but If the data of the contents which the user specified the specific keyword and agreed in said keyword in data, such as said text received, are contained in order to extract and keep only the data which a user needs The teletext receiving set of the information gathering mold extracts the data alternatively and it was made to keep it came to be developed.
[0004] By the way, the following can be mentioned as a teletext receiving set of the recently developed information gathering mold. The 1 is indicated by JP,61-285881,A. A user sets up a desired program name and a desired keyword, and if there is a program which was in agreement with said program name in data, such as said text received, the program information will be memorized to a reception file. Moreover, if the keyword which was in agreement with said keyword is in data, such as said text received, the image corresponding to that information is read from an image file, and it is made to display this image with data, such as text. The 2 is indicated by JP,62-185482,A. The reservation program and the non-reserving program are beforehand defined in data, such as text received. It memorizes immediately in the memory specified when data, such as said received text, were said reservation programs. Only when it accumulates, and data, such as said received text, are said non-reserving programs and an opening is in said memory, as storage and are recording are performed, it is made to lessen the latency time of the program which a user wants to watch. Although indicated by JP,63-13483,A, in addition, like Keyword ****** which the user set up the desired keyword and was in agreement with said keyword in data, such as text received, The thing make store data, such as text, temporarily in memory, reads after that data, such as said text made to store temporarily, one by one, and it was made to display, Although indicated by JP,2-41086,A and JP,2-41087,A, moreover, in the brand contained in the displayed stock price program like It is what registers as a brand which should accumulate what was specified with cursor, will accumulate it in memory if there are stock price data of said registered brand which is contained in a stock price program in data, such as text received, after it, and processed this stored data suitably.

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EFFECT OF THE INVENTION

[Effect of the Invention] According to this invention, the selection extract only of the data which a user needs out of data, such as text sent as a teletext signal, is carried out automatically. Storage, It accumulates. Further about the data of these many stored Two or more data list substitute, Since it is made to perform document generation of the display of the data which modification of each data-hierarchy-configuration and printing of rearranged two or more data were performed, and made a change of a hierarchical configuration, registration of rearranged two or more data or the data which made a change of a hierarchical configuration, etc. A user has the effectiveness of the ability to make said desired data (generated document) output in the form which a user tends to read at the time of a request out of said said stored data (generated document).

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, the above-mentioned conventional information storage mold teletext receiving set Data, such as text corresponding to the program for which a user asks in data, such as received text, Data, such as text which has the keyword for which a user asks, are obtained alternatively. Since data of what can be displayed suitably, such as said text, are what is memorized by memory etc. and is only accumulated in it in the form as it is after memorizing and storing up data, such as these text, in memory etc., The user has the problem that it is very difficult for a user to receive only required data in a legible form when required, out of data, such as said many of text which is memorized by said memory etc. and accumulated in it.
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MEANS

[Means for Solving the Problem] In the broadcast receiving set which receives a broadcast signal including the teletext signal with which this invention is multiplexed at the vertical-retrace-line period of a television signal in order to attain said purpose A profile storage means to memorize profile setting information, and an information selection means to search for the information which suited it from the reception broadcast signal based on said setting information memorized by said profile storage means, The receipt information are recording means which carries out sequential are recording of the information searched for with said information selection means, and goes, The means which consists of a document generation means to take out specific information out of the information accumulated in said receipt information are recording means, and to perform new document generation, and a document output means which outputs the document generated with said document generation means is provided.

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OPERATION

[Function] If data, such as text sent as a broadcast signal, are received in a receive section, first, the comparison with profile setting information is performed, the data will be extracted immediately and these data will be memorized by memory, if there are data of the contents which were in agreement with said profile setting information in the comparison. Next, after said data memorized by this memory are read suitably, document generation of the display of the data which modification of two or more data list substitute and each data-hierarchy-configuration and printing of rearranged two or more data were performed, and made a change of a hierarchical configuration, registration of rearranged two or more data or the data which made a change of a hierarchical configuration, etc. is performed.
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[0012] For the signal separation section and 3, as for the media data-processing section and 5, in drawing 1 , the image processing section and 4 are [1 / an antenna and 2 / a display and control section and 6] displays.
[0013] And an antenna 1 receives a television broadcasting signal and a teletext signal, and the signal separation section 2 separates the television signal and alphabetic signal in an input signal. The image processing section 3 possesses all the main components of the usual television signal receiver, and processes the inputted television signal. The media data-processing section 4 processes multimedia signals, such as an inputted alphabetic signal. A display and control section 5 carries out synthetic processing of the signal from the image processing section 3 and the media data-processing section 4, and a display 6 displays the inputted signal.
[0014] The outline of actuation of said teletext receiving set is as follows.
[0015] If a broadcast signal is received in an antenna 1, this reception broadcast signal will be supplied to the signal separation section 2, and will be divided into a television signal and an alphabetic signal there. Among this, in the image processing section 3, separation of a Horizontal Synchronizing signal, a Vertical Synchronizing signal, a sound signal, etc., etc. is performed, and a television signal is changed and outputted to the signal suitable for a display. Moreover, processing which is described below in the media data-processing section 4 is performed, and an alphabetic signal is similarly changed and outputted to the signal suitable for a display. The output signal of the image processing section 3 and the media data-processing section 4 is independently compounded in a display and control section 5, and is supplied to a display 6, and a necessary display is performed there.
[0016] Next, drawing 2 is the block diagram showing an example of the internal configuration of said media data-processing section 4.
[0017] drawing 2 — setting — 7 — a microprocessor (MPU) and 8 — main memory and 9 — an input/output interface (I/OIF) circuit and 10 — a drawing processor and 11 — for external storage and 14, as for a mouse and 16, a keyboard and 15 are [the memory for a display, and 12 / the media data interface section and 13 / a printer and 17] control buses.
[0018] And a microprocessor 7, main memory 8, the input/output interface circuit 9, the drawing processor 10, the memory 11 for a display, and the media data interface section 12 are combined through the control bus 17, respectively, and the media data interface section 12 is combined with the image processing section 3 through the signal separation section 2 and Rhine 19 through Rhine 18, respectively. Moreover, the memory 11 for a display is combined with a display and control section 5 through Rhine 20, and external storage 13, the keyboard 14, the mouse 15, and the printer 16 are combined with the media data interface section 12.
[0019] Although this media data-processing section 4 performs the following actuation, according to the already defined program, a microprocessor 7 performs these actuation.
[0020] Main memory 8 is constituted by RAM which consists of volatile semiconductor memory etc., and stores temporarily said program and program reference data which a microprocessor 4 performs. The input/output interface circuit 9 transmits the data of a control bus 17 to external storage 13, or transmits the data from external storage 13 to a control bus 17, and also it transmits a keyboard 14 and the input data from a mouse 15 to a control bus 17, and makes the data of a control bus 17 transmit to a printer 16. The drawing processor 10 generates the status signal displayed on a display 6. Memorandum ** 11 for a display is constituted by RAM which consists of volatile semiconductor memory etc., and it sends out a status signal to a display and control section 5 through Rhine 20 while it writes in the status signal generated by the drawing processor 10. The media data interface section 12 receives the alphabetic signal from the signal distribution section 80 through Rhine 18, and changes the signal into the thing of the data format in which digital processing is possible. The media data interface section 12 exchanges control information for coincidence between the image processing sections 3 through Rhine 19. Furthermore, external storage 13 is constituted by the magnetic disk which is the storage of a non-volatile, performs said program which a microprocessor 7 performs, and storing of said program reference data, and further, it performs storing of various kinds of data or a document so that it may state below. The direct input of the information as which a user specifies a keyboard 14 was carried out, and the mouse 15 is equipped with one or more carbon buttons.
[0021] Drawing 3 is drawing showing the software configuration of the system which a microprocessor 7 performs, and explains actuation of said media data-processing section 4 in more detail using drawing 3 .
[0022] drawing 3 — setting — 21 — an operating system and 22 — for the received-data Monitoring Department and 25, as for the report Management Department and 27, a data takeoff connection and 26 are [the common graphic section and 23 / the profile data Management Department and 24 / document falsework and 28] the documentation-management sections, this software configuration is constituted by these program groups, and these programs group is stored in external storage 13.
[0023] First, an operating system 21 manages the resource of the program group built in a system, main memory 8, and external storage 13 grade, and controls signal processing of the media data-processing section 4 whole. Since this operating system 21 very thing is generally known well, the detailed explanation beyond this is omitted.
[0024] Next, the common graphic section 22 offers the graphic function used in common in said program group, and the I/O function between a mouse 15 or keyboard 14 grade, respectively. Since the graphic operation which this common graphic operation section 22

performs is generally also known well, the detailed explanation beyond this is omitted.
[0025] Subsequently, the profile data Management Department 23 manages the profile configuration file created based on the profile which a user sets up according to an individual. Receipt storage of the profile configuration file created here is carried out at external storage 13, and the following contents are set to the profile configuration file. That is, one of them is a data list for specifying the information chosen from the received information, and one which this will consist of a keyword list and a classification code list, and will accept it the inside is the format specification for outputting as a document. In addition, in here, the element of **** with which each of said keyword lists and said classification code lists constitutes these lists consists of a keyword, its significance and a classification code, and its significance.
[0026] then — the case where the information which the received-data Monitoring Department 24 was monitoring continuously whether the information which agreed by the contents of said profile configuration file using the media data interface section 12 was received, and agreed by said contents is received — the media data interface section 12 — the notice of incorporation of said information is performed to the report Management Department 26 in response to the notice.
[0027] Next, if the notice of incorporation of said information is received from said received-data Monitoring Department 24, the report Management Department 26 incorporates said information, classifies said information into the contents which agreed by the contents of said profile configuration file as one report, and stores this in external storage 13. Moreover, the report Management Department 26 also performs management of the report which is memorized by external storage 13 and accumulated in it, and functions, such as deletion of a report, marking of the report outputted as a document, and reclassification of a report, hit this as management of the report in this case. In here, the report set as the object of said deletion is selected based on the following criteria. That is, what exceeds the storage limitation of a non-outputted report about the report (non-outputted report) to which that to which the 1 exceeds the storage limitation of an outputted report about the report (outputted report) already outputted as a document, and its 2 are not yet outputted as a document, and its 3 are the reports the user instructed deletion to be. In addition, he is trying for how to set said storage limitation to become long according to the significance (which of the significance in which the user did a selection setup, and the significance set up by the broadcasting station side, or the higher one) of a report, and a setup and storage limitation of this significance are specified with the parameter in the case of system construction.
[0028] Subsequently, the document falsework 27 makes a printer 16 supply and print out the document which extracted the report incorporated by the report Management Department 26, generated this in the document according to the format set as the profile configuration file, and was generated here if needed. Generation of this document may be performed when a report which fulfills the conditions of a setup chosen specially has been sent, when setting and performing a fixed time interval periodically, and the conditions of said setup chosen specially are set up by the profile configuration file. When a report which fulfills the conditions of a setup which starting of processing of generation of said document was performed by only the passage of time, and was specially chosen when a fixed time interval was periodically set and performed in here has been sent and it performs, the media data interface section 12 detects formation of the conditions of said setup, and generation is performed in said document by transmitting the detection result to the document falsework 27.
[0029] Finally, the documentation-management section 28 registers the document generated by the document falsework 27 as a document which should carry out a documentation management if needed, and functions retrieval of a document, the already registered ejection of a document other than memorizing and accumulating in external storage 13 according to a demand of a user.
[0030] Drawing 4 shows the configuration of the teletext signal multiplexed within the vertical-retrace-line period of a television signal, as for the signal, the data for one frame consist of combination of a header unit 29 and a body part 30, and broadcast transmission of two or more data is carried out by the repeat of this combination. By the way, ****** and the body part 30 by which data, such as significance of the data set up by the classification code, keyword, and broadcasting station side and the die length (byte count) of a body part 30, are contained in the header unit 29 of this signal are ****** in which it is divided into two or more subblocks, and that die length, the format of data, and the stereo of data are included for every subblock.
[0031] Next, monitor processing of the received-character signal performed in the hardware of said media data interface section 12 is explained using the flow chart of drawing 5 .
[0032] In introduction and step 31, the classification code and keyword which were set up by the profile configuration file are taken out, they are set to the media data interface section 12, and monitor processing is initialized. The check of each of said frame within the continuing alphabetic signal which the media data interface section 12 received in step 32 is repeated, and is performed. Moreover, in step 33, the media data interface section 12 digitizes the alphabetic signal inputted through Rhine 18, and investigates whether the classification code or keyword which is in agreement with the classification code or keyword set as the header unit 29 in the frame of this alphabetic signal at said processing step 31 exists. If the frame corresponding [a keyword's / a classification code or] is detected at this time, it shifts to step 34, and in step 34, the media data interface section 12 will notify the congruous purports to a microprocessor 7, and will end this processing.
[0033] Then, the processing which stores as a report the necessary data in the input signal performed at the report Management Department 26 is explained using the drawing 6 flow chart.
[0034] In introduction and step 35, the report Management Department 26 will receive the conditions of a setup which agreed with the data in this frame from the media data interface section 12, if the notice of the coincidence in said step 34 is received. Then, the report Management Department 26 investigates whether the folder which stores the data corresponding to the conditions of said setup exists in external storage 13. At this time, when said folder does not carry out, it shifts to step 37, and in step 37, the report Management Department 26 generates the folder which stores said data in external storage 13. Next, in step 38, the report Management Department 26 adds attribute information for the received data as one report, stores this in said corresponding folder of external storage 13, and ends this processing.
[0035] In this case, information, such as a flag which shows that it is output ending as the significance of the report which the user specified on condition that the setup as attribute information added to said report, the significance of the report which the broadcasting station side set up, a date, and a document, corresponds to this.

[0036] Next, output processing, such as document generation performed by the document falsework 27 and printing, is explained using the drawing 7 flow chart.
[0037] In introduction and step 39, the document falsework 27 determines sequence of a report. In this case, although the decision of the sequence of a report is made using either of three approaches shown below, it comes to be able to perform decision of the sequence of a report in the combination of these three approaches by determining the priority of application between these three methods collectively. That is, the 1 is the approach of setting up sequence of a report in order of the significance set as the profile configuration file, the 2 is the approach of setting up sequence of a report in order of the significance set to the report itself, and the 3 is the approach of setting up sequence in order of the date set as the report. In continuing step 40, the document falsework 27 determines format of the document outputted. In this case, the decision of the format of a document is made according to the format set as the profile configuration file, and can perform not only when printing by the printer 16, but assignment of the format in the case of displaying on a display 6. And in the display of a display 6, it is desirable to constitute a related report hierarchical in outline processor, and to make it a format which is legible. Next, in step 41, the document falsework 27 performs document generation by casting. Here, according to the format set up in said step 40, a report is taken out in order of the report determined in said step 39, casting is performed, a document is generated, and an outputted flag is made into truth about the taken-out report. Subsequently, in step 42, the document falsework 27 outputs the document to a document output unit. Here, if there are output directions to a printer 16, the document generated in said step 41 will be supplied to a printer 16, and printing will be performed [then,], for example. On the other hand, if there are output directions to a display 6, the document similarly generated in said step 41 will be supplied to a display 6, and a display will be performed there. In addition, when there are no directions to a document output unit, said step 42 is not performed. Subsequently, in step 43, the document falsework 27 registers a document. In this case, when document registration is specified in the profile configuration file, registration is performed in the documentation-management section 28 as delivery and a document which should be carried out a documentation management in the document generated at said step 41, and this processing is ended.

[Translation done.]

* NOTICES *

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the block diagram showing the outline of the whole configuration of the teletext receiving set concerning this invention.

[Drawing 2] It is the block block diagram showing one example of the media data-processing section concerning this invention.
[Drawing 3] It is the block diagram showing the software of the system used by this invention.
[Drawing 4] It is the format Fig. showing the received data contained in a teletext signal.
[Drawing 5] It is the flow chart which performs monitor processing of received data.
[Drawing 6] It is the flow chart which performs storing processing of received data.
[Drawing 7] It is the flow chart which shows processing of generation of a document, printing, etc.
[Description of Notations]
1 Antenna
2 Signal Separation Section
3 Image Processing Section
4 Media Data-Processing Section
5 Display and Control Section
6 Display
7 Microprocessor (MPU)
8 Main Memory
9 Input/output Interface Circuit
10 Drawing Processor
11 Memory for Display
12 Media Data Interface Section
13 External Storage
14 Keyboard
15 Mouse
16 Printer
17 Control Bus
21 Operating System
22 Common Graphic Section
23 Profile Data Management Department
24 Received-Data Monitoring Department
26 Report Management Department
27 Document Falsework
28 Documentation-Management Section

[Translation done.]

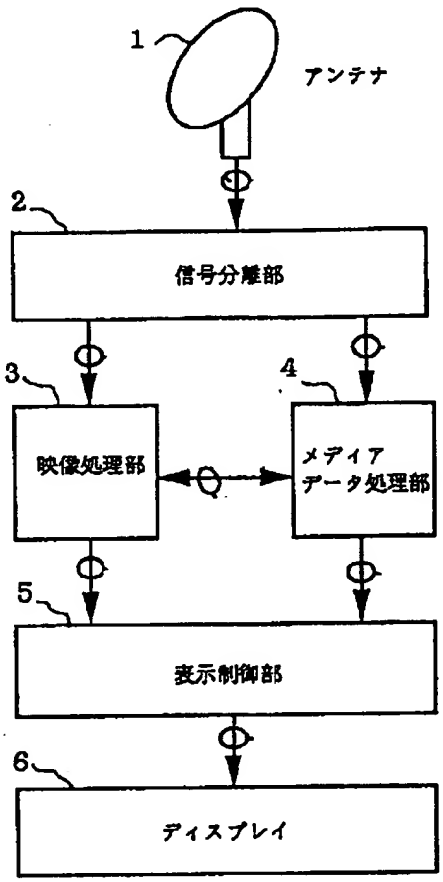
* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DRAWINGS

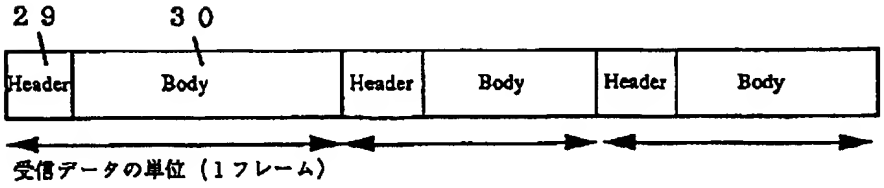
[Drawing 1]

【図１】



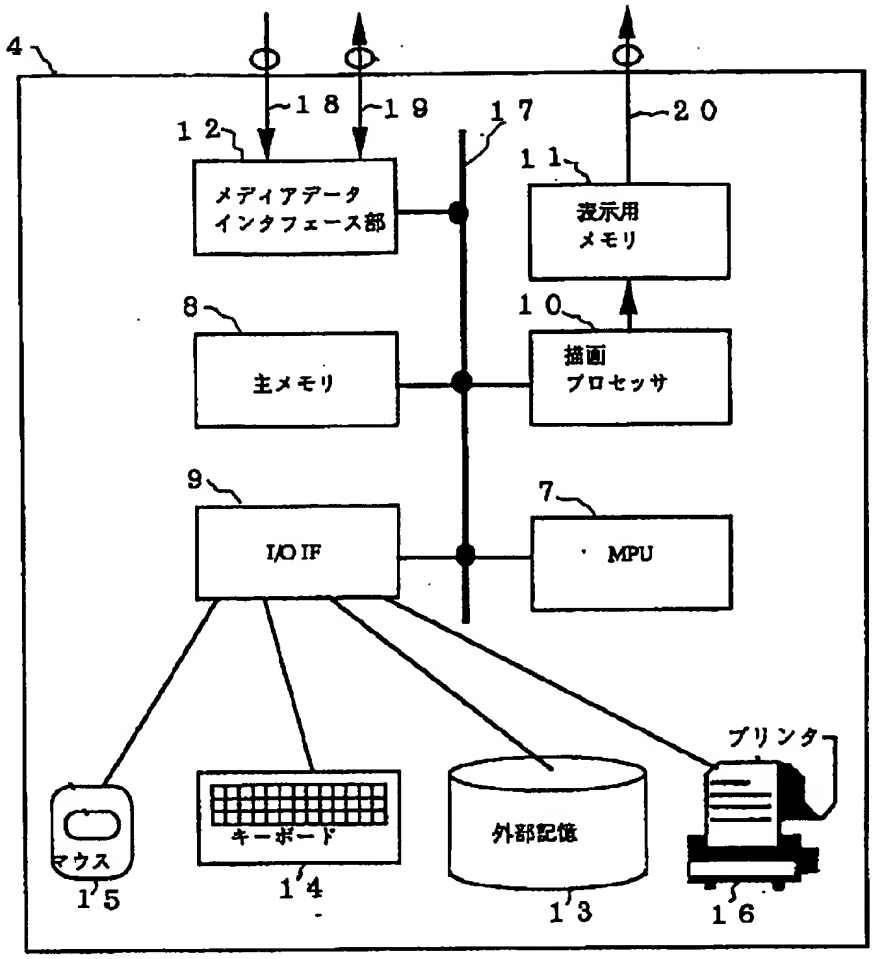
[Drawing 4]

【図４】



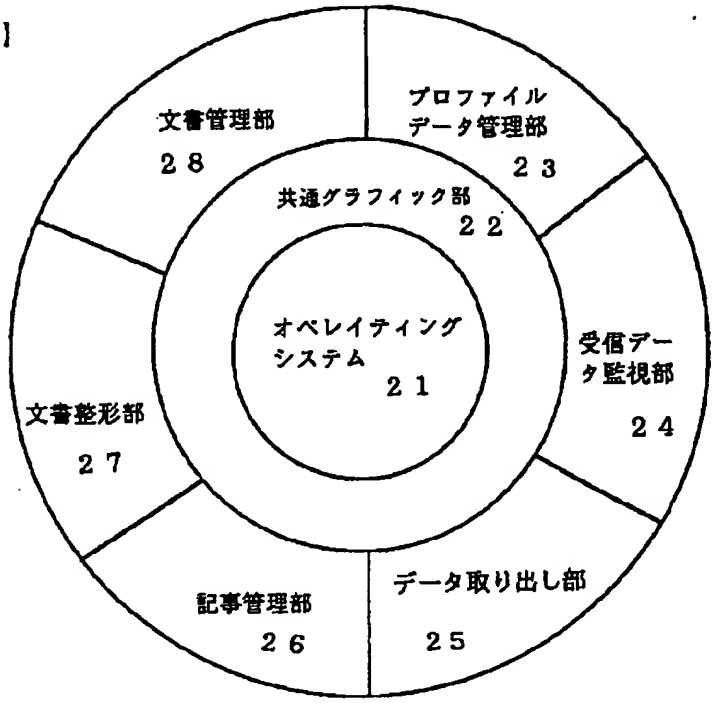
[Drawing 2]

【図２】

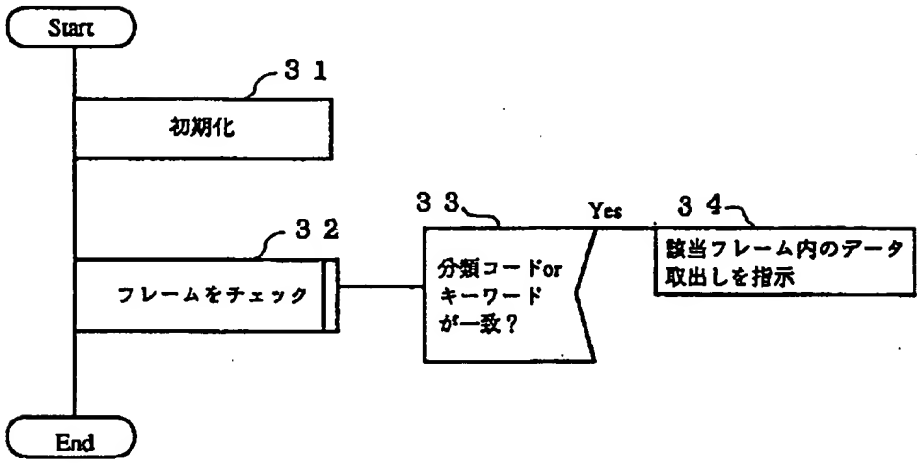

4
18
19
17
20
12
メディアデータ
インタフェース部
11
表示用
メモリ
8
主メモリ
10
描画
プロセッサ
9
I/O IF
7
MPU
プリンタ
マウス
15
キーボード
14
外部記憶
13
16

[Drawing 3]

【図３】

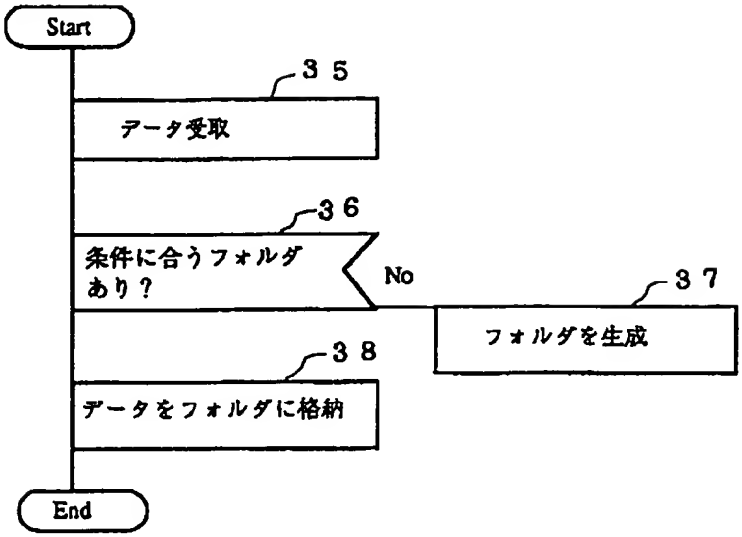


[Drawing 5]
【図５】

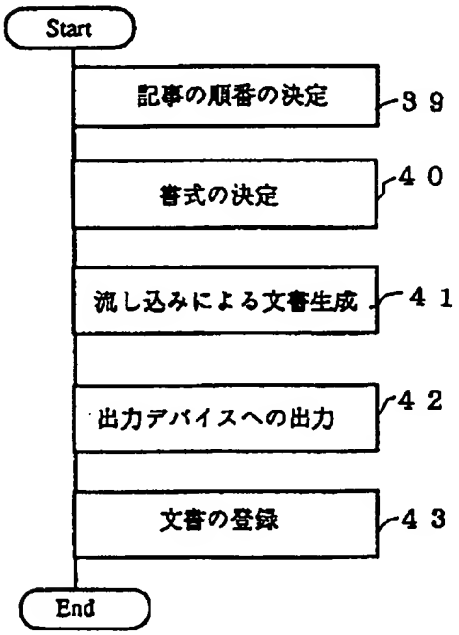


[Drawing 6]

【図６】



[Drawing 7]
【図７】



[Translation done.]

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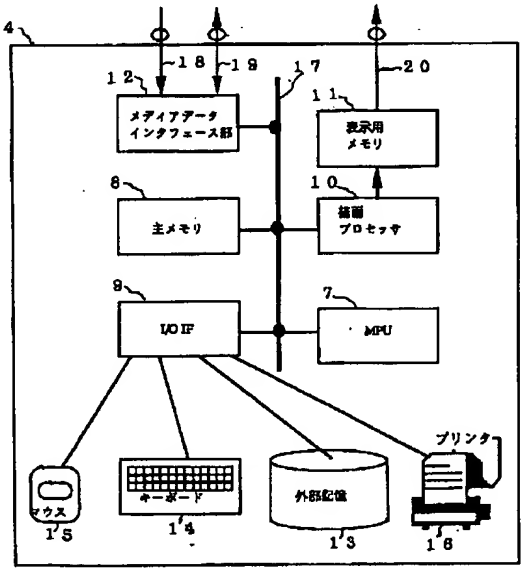
(54)【発明の名称】　受信情報蓄積型文字放送受信装置

(57)【要約】

【目的】　放送信号として送られてくる膨大な文字情報等の中から必要の情報だけを必要な時点にユーザーが見やすい形で受領できる文字放送受信装置の提供。

【構成】　テレビジョン信号の垂直帰線期間に多重化されている文字放送信号を含む放送信号を受信する放送受信装置において、プロファイル設定情報を記憶するプロファイル記憶手段１３と、プロファイル記憶手段１３に記憶されている設定情報に基づいて受信放送信号からそれに適合した情報を求める情報選択手段１２と、情報選択手段１２で求めた情報を順次蓄積して行く受信情報蓄積手段１３と、受信情報蓄積手段１３に蓄積されている情報の中から特定の情報を取り出して新たな文書生成を行なう文書生成手段１２と、文書生成手段１２で生成された文書の出力を行なう文書出力手段１６とを備えた。

【図２】



1

【特許請求の範囲】

【請求項1】　テレビジョン信号の垂直帰線期間に多重化されている文字放送信号を含む放送信号を受信する放送受信装置において、プロファイル設定情報を記憶するプロファイル記憶手段と、前記プロファイル記憶手段に記憶されている前記設定情報に基づいて受信放送信号からそれに適合した情報を求める情報選択手段と、前記情報選択手段で求めた情報を順次蓄積して行く受信情報蓄積手段と、前記受信情報蓄積手段に蓄積されている情報の中から特定の情報を取り出して新たな文書生成を行なう文書生成手段と、前記文書生成手段で生成された文書の出力を行なう文書出力手段とを備えたことを特徴とする文字放送受信装置。

【請求項2】　前記プロファイル記憶手段は特定のキーワードとその重要度からなるキーワードリストを格納しており、前記情報選択手段は受信放送信号の中から少なくとも前記キーワードに基づいてそれに該当する情報を求めるものであることを特徴とする請求項1記載の文字放送受信装置。

【請求項3】　前記プロファイル記憶手段は特定の分類コードとその重要度からなる分類コードリストを格納しており、前記情報選択手段は受信放送信号の中から少なくとも前記分類コードに基づいてそれに該当する情報を求めるものであることを特徴とする請求項1記載の文字放送受信装置。

【請求項4】　前記文書生成手段は、前記受信情報蓄積手段に蓄積されている情報について、前記情報に付加されている選択条件に対する重要度の順番または放送局側が設定した重要度の順番にしたがって文書内の配置を定める文書生成を行なうことを特徴とする請求項1記載の文字放送受信装置。

【請求項5】　前記文書生成手段は、前記受信情報蓄積手段に蓄積されていた情報について、画面表示時に見やすいように関連する内容の情報をまとめて階層的な構成にする文書生成を行なうことを特徴とする請求項1記載の文字放送受信装置。

【請求項6】　前記文書生成手段は、生成された文書を、前記受信情報蓄積手段に再び蓄積するか、または、指定された時間間隔にしたがって前記文書出力手段に供給することを特徴とする請求項1記載の文字放送受信装置。

【請求項7】　前記文書生成手段は、前記受信情報蓄積手段に蓄積されていた情報について、情報内容の一部削除、情報の再分類、文書出力手段で出力した情報のマーク付けを行なうことを特徴とする請求項1記載の文字放送受信装置。

【請求項8】　前記文書生成手段は、前記受信情報蓄積手段に蓄積されていた情報または生成された文書について、保管期限を過ぎたものやユーザーが指定したものを削除する機能を有していることを特徴とする請求項1記載の文字放送受信装置。

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【発明の詳細な説明】

【0001】

【産業上の利用分野】本発明は、テレビジョン信号の垂直帰線期間に多重化されている文字放送信号を含む放送信号を受信する文字放送受信装置に係り、特に、前記文字放送信号として送られてきた文字情報や静止画像情報等のマルチメディアデータからユーザーが必要とするデータを選択的に抽出することが可能な受信情報蓄積型文字放送受信装置に関する。

【0002】

【従来の技術】一般に、文字放送システムとしては、放送されるテレビジョン信号の垂直帰線期間内に、文字情報等を前記テレビジョン信号に多重化して放送しているものが知られている。

【0003】そして、この種の文字放送システムに用いられる文字放送受信装置にあっては、単に、文字放送信号を受信するだけでなく、受信される文字情報等のデータの中で、ユーザーが必要とするデータだけを抽出して保管するために、ユーザーが特定のキーワードを指定し、前記受信される文字情報等のデータの中に前記キーワードに合致した内容のデータが含まれていれば、そのデータを選択的に抽出して保管するようにした情報収集型の文字放送受信装置が開発されるようになった。

【0004】ところで、最近になって開発された情報収集型の文字放送受信装置としては、以下のようなものを挙げることができる。その1は、特開昭61－285881号に開示されたものであって、ユーザーが所望の番組名やキーワードを設定し、前記受信される文字情報等のデータの中に前記番組名に一致した番組があればその番組情報を受信ファイルに記憶し、また、前記受信される文字情報等のデータの中に前記キーワードに一致したキーワードがあればその情報に対応する映像を映像ファイルから読み出し、この映像を文字情報等のデータとともに表示させるようにしたものである。その2は、特開昭62－185482号に開示されたものであって、受信される文字情報等のデータの中で予め予約番組と非予約番組とを定めておき、前記受信された文字情報等のデータが前記予約番組であるときには指定されたメモリに直ちに記憶、蓄積を行ない、また、前記受信された文字情報等のデータが前記非予約番組であるときには前記メモリに空きがある場合だけ記憶、蓄積を行なうようにして、ユーザーが見たい番組の待ち時間を少なくするようにしたものである。この他にも、特開昭63－13483号に開示されたもののように、ユーザーが所望のキーワードを設定し、受信される文字情報等のデータの中に前記キーワードに一致したキーワードあれば、文字情報等のデータをメモリに一時記憶させ、その後、前記一時記憶させた文字情報等のデータを順次読み出して表示させるようにしたもの、また、特開平2－41086号や

特開平２－４１０８７号に開示されたもののように、表示された株価番組に含まれている銘柄の中で、カーソルで指定したものを蓄積すべき銘柄として登録し、それ以後、受信される文字情報等のデータの中に株価番組に含まれる前記登録された銘柄の株価データがあればそれをメモリに蓄積し、この蓄積されたデータを適宜処理するようにしたもの等である。

【０００５】

【発明が解決しようとする課題】しかるに、前述の従来の情報蓄積型文字放送受信装置は、受信された文字情報等のデータの中で、ユーザーが所望する番組に対応した文字情報等のデータや、ユーザーが所望するキーワードを有する文字情報等のデータが選択的に得られ、これらの文字情報等のデータをメモリ等に記憶、蓄積させた後、適宜表示することはできるものの、前記文字情報等のデータは単にそのままの形でメモリ等に記憶、蓄積されているものであるため、ユーザーが前記メモリ等に記憶、蓄積されている多くの前記文字情報等のデータの中から、必要なデータだけを必要な時点にユーザーが見やすい形で受領することは極めて困難であるという問題を有している。

【０００６】本発明は、このような問題点を除去するためのもので、その目的は、放送信号として送られてくる膨大な文字情報等のデータの中から、ユーザーが必要とするデータだけを必要な時点にユーザーが見やすい形で受領できる情報蓄積型文字放送受信装置を提供することにある。

【０００７】

【課題を解決するための手段】前記目的を達成するために、本発明は、テレビジョン信号の垂直帰線期間に多重化されている文字放送信号を含む放送信号を受信する放送受信装置において、プロファイル設定情報を記憶するプロファイル記憶手段と、前記プロファイル記憶手段に記憶されている前記設定情報に基づいて受信放送信号からそれに適合した情報を求める情報選択手段と、前記情報選択手段で求めた情報を順次蓄積して行く受信情報蓄積手段と、前記受信情報蓄積手段に蓄積されている情報の中から特定の情報を取り出して新たな文書生成を行なう文書生成手段と、前記文書生成手段で生成された文書の出力を行なう文書出力手段とからなる手段を具備している。

【０００８】

【作用】放送信号として送られてくる文字情報等のデータが受信部において受信されると、始めに、これらのデータは、プロファイル設定情報との比較が行なわれ、その比較において前記プロファイル設定情報と一致した内容のデータがあれば、直ちにそのデータが抽出されてメモリに記憶される。次に、このメモリに記憶された前記データは、適宜読み出された後、複数データの並び換え、各データの階層的構成の変更、並び換えた複数データの印刷または階層的構成の変更を行なったデータの表示、並び換えた複数データや階層的構成の変更を行なったデータの登録等の文書生成が行なわれる。

【０００９】このように、本発明は、ユーザーが所望する文字情報等のデータを単に選択抽出して蓄積しているだけでなく、この蓄積後の前記データについて前述のような文書生成を行なっているので、ユーザーは前記蓄積された前記データ（生成された文書）の中から、所望の前記データ（生成された文書）を所望の時点にユーザーの読みやすい形で出力させることができる。

【００１０】

【実施例】以下、本発明の実施例を図面を用いて説明する。

【００１１】図１は、本発明に係る文字放送受信装置の全体構成を示すブロック図である。

【００１２】図１において、１はアンテナ、２は信号分離部、３は映像処理部、４はメディアデータ処理部、５は表示制御部、６はディスプレイである。

【００１３】そして、アンテナ１はテレビジョン放送信号と文字放送信号とを受信し、信号分離部２は受信信号中のテレビジョン信号と文字信号とを分離する。映像処理部３は通常のテレビジョン信号受信機の主要な構成部分を全て具備しており、入力されたテレビジョン信号の処理を行なう。メディアデータ処理部４は入力された文字信号等のマルチメディア信号の処理を行なう。表示制御部５は映像処理部３とメディアデータ処理部４からの信号を合成処理し、ディスプレイ６は入力された信号の表示を行なう。

【００１４】前記文字放送受信装置の動作の概要は、次のとおりである。

【００１５】アンテナ１において放送信号が受信されると、この受信放送信号は信号分離部２に供給され、そこでテレビジョン信号と文字信号とに分離される。この内、テレビジョン信号は映像処理部３において水平同期信号や垂直同期信号、音声信号等の分離が行なわれ、表示に適した信号に変換されて出力される。また、文字信号はメディアデータ処理部４において以下に述べるような処理が行なわれ、同様に、表示に適した信号に変換されて出力される。映像処理部３及びメディアデータ処理部４の出力信号は表示制御部５において単独にまたは合成されてディスプレイ６に供給され、そこで所要の表示が行なわれる。

【００１６】次に、図２は、前記メディアデータ処理部４の内部構成の一例を示すブロック図である。

【００１７】図２において、７はマイクロプロセッサ（ＭＰＵ）、８は主メモリ、９は入出力インタフェース（Ｉ／ＯＩＦ）回路、１０は描画プロセッサ、１１は表示用メモリ、１２はメディアデータインタフェース部、１３は外部記憶装置、１４はキーボード、１５はマウス、１６はプリンタ、１７は制御バスである。

【００１８】そして、マイクロプロセッサ７、主メモリ８、入出力インタフェース回路９、描画プロセッサ１０、表示用メモリ１１、メディアデータインタフェース部１２はそれぞれ制御バス１７を介して結合されており、メディアデータインタフェース部１２はライン１８を介して信号分離部２とライン１９を介して映像処理部３にそれぞれ結合されている。また、表示用メモリ１１はライン２０を介して表示制御部５に結合され、メディアデータインタフェース部１２には外部記憶装置１３、キーボード１４、マウス１５、プリンタ１６が結合されている。

【００１９】このメディアデータ処理部４は、次のような動作を行なうが、これらの動作は既に定められているプログラムに従ってマイクロプロセッサ７が実行するものである。

【００２０】主メモリ８は、揮発性の半導体メモリ等からなるＲＡＭによって構成され、マイクロプロセッサ４が実行する前記プログラムやプログラム参照データを一時的に格納している。入出力インタフェース回路９は、制御バス１７のデータを外部記憶装置１３に伝送したり、外部記憶装置１３からのデータを制御バス１７に伝送したりする他に、キーボード１４、マウス１５からの入力データを制御バス１７に伝送し、制御バス１７のデータをプリンタ１６に伝送させる。描画プロセッサ１０は、ディスプレイ６に表示される表示信号の生成を行なう。表示用メモリ１１は、揮発性の半導体メモリ等からなるＲＡＭによって構成され、描画プロセッサ１０で生成された表示信号の書き込みを行なうとともに、表示信号をライン２０を介して表示制御部５に送出する。メディアデータインタフェース部１２は、ライン１８を介して信号分配部80からの文字信号を受け、その信号をデジタル処理可能なデータ形式のものに変換する。同時に、メディアデータインタフェース部１２は、ライン１９を介して映像処理部３との間で制御情報の交換を行う。さらに、外部記憶装置１３は、不揮発性の記憶媒体である磁気ディスク等により構成され、マイクロプロセッサ７が実行する前記プログラムや前記プログラム参照データの格納を行ない、さらに、以下に述べるように、各種のデータまたは文書の格納を行なう。キーボード１４は、ユーザーが指定する情報が直接入力され、マウス１５は、１個以上のボタンを備えている。

【００２１】図３は、マイクロプロセッサ７が実行するシステムのソフトウェア構成を示す図であり、図３を用いて、前記メディアデータ処理部４の動作をさらに詳しく説明する。

【００２２】図３において、２１はオペレイティングシステム、２２は共通グラフィック部、２３はプロファイルデータ管理部、２４は受信データ監視部、２５はデータ取出し部、２６は記事管理部、２７は文書整形部、２８は文書管理部であり、このソフトウェア構成はこれらのプログラム群によって構成されており、これらプログラム群は外部記憶装置１３内に格納されている。

【００２３】まず、オペレイティングシステム２１は、システムに内蔵されるプログラム群や主メモリ８、外部記憶装置１３等のリソースを管理するもので、メディアデータ処理部４全体の信号処理の制御を行なうものである。このオペレイティングシステム２１自体は、一般的に良く知られているものであるので、これ以上の詳しい説明は省略する。

【００２４】次に、共通グラフィック部２２は、前記プログラム群において共通に利用されるグラフィック機能、及び、マウス１５やキーボード１４等との間の入出力機能をそれぞれ提供するものである。この共通グラフィック処理部２２が行なうグラフィック処理も一般的には良く知られているものであるので、これ以上の詳しい説明は省略する。

【００２５】次いで、プロファイルデータ管理部２３は、ユーザーが個別に設定するプロファイルに基づいて作成されたプロファイル設定ファイルの管理を行なうものである。ここで作成されたプロファイル設定ファイルは、外部記憶装置１３に収納保管されているもので、プロファイル設定ファイルには以下の内容が設定されている。即ち、その中の１つは、受信された情報の中から選択する情報を指定するためのデータリストであって、これはキーワードリストと分類コードリストからなり、その中のもう１つは、文書として出力するための書式指定である。なお、ここにおいて、前記キーワードリスト及び前記分類コードリストは、いずれも、これらのリストを構成する箇々の要素がキーワードとその重要度及び分類コードとその重要度からなっているものである。

【００２６】続いて、受信データ監視部２４は、メディアデータインタフェース部１２を用いて前記プロファイル設定ファイルの内容に合致した情報が受信されたか否かを常時監視していて、前記内容に合致した情報が受信された場合にはメディアデータインタフェース部１２その通知を受け、記事管理部２６に前記情報の取り込み通知を行なうものである。

【００２７】次に、記事管理部２６は、前記受信データ監視部２４から前記情報の取り込み通知を受けると、前記情報の取り込みを行い、前記情報を１つの記事として前記プロファイル設定ファイルの内容に合致した内容に分類し、これを外部記憶装置１３に格納するものである。また、記事管理部２６は、外部記憶装置１３に記憶、蓄積されている記事の管理も行うもので、この際の記事の管理としては、記事の削除、文書として出力した記事のマーク付け、記事の再分類等の機能がこれに当たるものである。ここにおいて、前記削除の対象となる記事は、以下の基準に基づいて選定される。即ち、その１は、既に文書として出力された記事（出力済み記事）については出力済み記事の保管期限を越えるもの、その２

は、未だ文書として出力されていない記事（未出力記事）については未出力記事の保管期限を越えるもの、その3は、ユーザーが削除を指示した記事である。なお、前記保管期限の定め方は、記事の重要度（ユーザーが選択設定した重要度と放送局側で設定した重要度のどちらか高い方）に従って長くなるようにしており、この重要度の設定と保管期限はシステム設定の際にパラメータにより指定している。

【0028】次いで、文書整形部27は、記事管理部26により取り込まれた記事を抽出し、これをプロファイル設定ファイルに設定されている書式に従った文書に生成し、ここで生成された文書を必要に応じてプリンタ16に供給してプリントアウトさせるものである。この文書の生成は、定期的に一定の時間間隔をおいて実行する場合と、特別に選択した設定の条件を満たすような記事が送られてきたときに実行する場合とがあり、前記特別に選択した設定の条件はプロファイル設定ファイルによって設定している。ここにおいて、定期的に一定の時間間隔をおいて実行する場合は、時間の経過によってのみ前記文書の生成の処理の起動が行なわれ、また、特別に選択した設定の条件を満たすような記事が送られてきたときに実行する場合は、前記設定の条件の成立をメディアデータインタフェース部12が検出し、その検出結果を文書整形部27に伝達することにより前記文書を生成が行なわれる。

【0029】最後に、文書管理部28は、文書整形部27で生成した文書を、必要に応じて文書管理をすべき文書として登録し、外部記憶装置13に記憶、蓄積することの他に、ユーザーの要求に応じて文書の検索、及び、既に登録されている文書の取り出し等の機能を行なうものである。

【0030】図4は、テレビジョン信号の垂直帰線期間内に多重化されている文字放送信号の構成を示すもので、信号は1フレーム分のデータがヘッダ部29とボディ部30の組合せからなっており、複数のデータはこの組み合せの繰り返しで放送送信される。ところで、この信号のヘッダ部29には、分類コード、キーワード、放送局側で設定したデータの重要度、ボディ部30の長さ（バイト数）等のデータが含まれるており、ボディ部30は、複数のサブブロックに分かれ、各サブブロック毎に、その長さ、データの形式、データの実体が含まれるている。

【0031】次に、図5のフローチャートを用いて、前記メディアデータインタフェース部12のハードウェアにおいて実行される受信文字信号の監視処理について説明する。

【0032】始めに、ステップ31において、プロファイル設定ファイルで設定された分類コード、キーワードを取り出し、それらをメディアデータインタフェース部12にセットして監視処理の初期化を行う。続く、ステップ32において、メディアデータインタフェース部12が受けた文字信号内の前記各フレームのチェックを繰り返し行なう。また、ステップ33において、メディアデータインタフェース部12は、ライン18を介して入力される文字信号をデジタル化し、この文字信号のフレーム内のヘッダ部29に前記処理ステップ31で設定した分類コードあるいはキーワードと一致する分類コードあるいはキーワードが存在するか否かの調査を行なう。このとき、分類コードあるいはキーワードの一致するフレームが検出されると、ステップ34に移行し、ステップ34において、メディアデータインタフェース部12は一致した旨をマイクロプロセッサ7に通知してこの処理を終了する。

【0033】続いて、図6フローチャートを用いて、記事管理部26で行われる受信信号中の所要のデータを記事として格納する処理について説明する。

【0034】始めに、ステップ35において、記事管理部26は、前記ステップ34における一致の通知を受けると、このフレーム内のデータと合致した設定の条件をメディアデータインタフェース部12から受領する。続いて、記事管理部26は、前記設定の条件に合致したデータを格納するフォルダが外部記憶装置13内に存在するか否かの調査を行なう。このとき、前記フォルダがしない場合にはステップ37に移行し、ステップ37において、記事管理部26は、外部記憶装置13内に前記データを格納するフォルダを生成する。次に、ステップ38において、記事管理部26は、受領したデータを一つの記事として属性情報を付加し、これを外部記憶装置13の前記該当するフォルダ内に格納してこの処理を終了する。

【0035】この場合、前記記事に付加する属性情報としては、ユーザーが設定の条件で指定した記事の重要度、放送局側が設定した記事の重要度、日付、文書として出力済みであることを示すフラグ等の情報がこれに該当する。

【0036】次に、図7フローチャートを用いて、文書整形部27で行われる文書生成及び印刷等の出力処理について説明する。

【0037】始めに、ステップ39において、文書整形部27は、記事の順番の決定を行なう。この際に、記事の順番の決定は、以下に示す3つの方法のいずれかを用いて行なわれるが、これら3つの方式間における適用の優先順位を併せて決定することにより、これら3つの方法の組み合わせで記事の順番の決定ができるようになる。即ち、その1は、プロファイル設定ファイルに設定されている重要度の順に記事の順番の設定を行なう方法であり、その2は、記事自体に設定されている重要度の順に記事の順番の設定を行なう方法であり、その3は、記事に設定されている日付の順で順番の設定を行なう方法である。続く、ステップ40において、文書整形部2

７は、出力される文書の書式の決定を行なう。この際に、文書の書式の決定は、プロファイル設定ファイルに設定されている書式に従って行なわれるもので、プリンタ１６で印刷する場合だけではなく、ディスプレイ６で表示を行なう場合のフォーマットの指定も行なうことができる。そして、ディスプレイ６の表示の場合は、関連する記事をアウトラインプロセッサ的に階層的に構成して、見やすいようなフォーマットにするのが好ましい。次に、ステップ４１において、文書整形部２７は、流し込みによる文書生成を行なう。ここでは前記ステップ４０において設定された書式に従って、前記ステップ３９において決定された記事の順に記事を取り出して流し込みを行ない、文書を生成するものであって、取り出した記事については出力済みフラグを真とするものである。次いで、ステップ４２において、文書整形部２７は、文書出力装置への文書の出力を行なう。ここでは、例えば、プリンタ１６への出力指示があれば、前記ステップ４１において生成した文書をプリンタ１６に供給し、そこで印刷が行なわれる。一方、ディスプレイ６への出力指示があれば、同じく前記ステップ４１において生成した文書をディスプレイ６に供給し、そこで表示が行なわれる。なお、文書出力装置に対する何等の指示がない場合は前記ステップ４２は実行されない。次いで、ステップ４３において、文書整形部２７は、文書の登録を行なう。この場合に、プロファイル設定ファイルにおいて文書登録が指定されているときは、前記ステップ４１で生成した文書を文書管理部２８に送り、文書管理すべき文書として登録が行なわれて、この処理を終了する。

【００３８】

【発明の効果】本発明によれば、文字放送信号として送られてくる文字情報等のデータの中からユーザーが必要とするデータだけを自動的に選択抽出して記憶、蓄積し、この蓄積されている多くのデータについてさらに複数データの並び換え、各データの階層的構成の変更、並び換えた複数データの印刷または階層的構成の変更を行なったデータの表示、並び換えた複数データや階層的構成の変更を行なったデータの登録等の文書生成を行なうようにしているので、ユーザーは前記蓄積された前記データ（生成された文書）の中から、所望の前記データ（生成された文書）を所望の時点にユーザーの読みやすい形で出力させることができるという効果がある。

【図面の簡単な説明】

【図１】本発明に係る文字放送受信装置の全体構成の概要を示すブロック図である。

【図２】本発明に係るメディアデータ処理部の一実施例を示すブロック構成図である。

【図３】本発明で使用されるシステムのソフトウェアを示す構成図である。

【図４】文字放送信号に含まれる受信データを示すフォーマット図である。

【図５】受信データの監視処理を行なうフローチャートである。

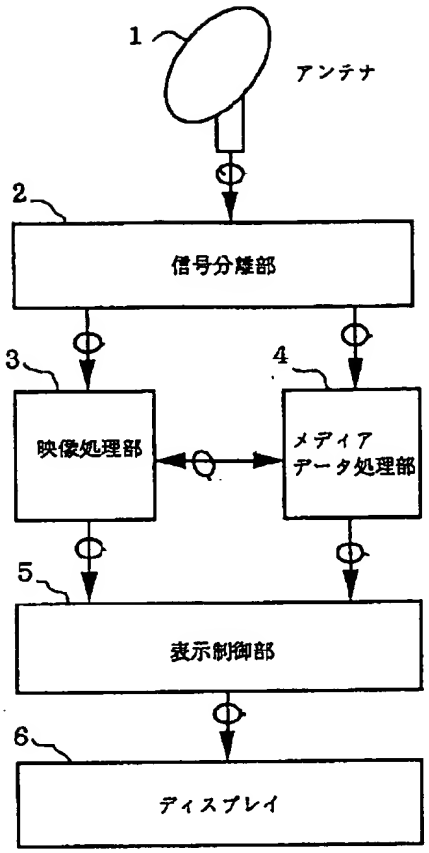
【図６】受信データの格納処理を行なうフローチャートである。

【図７】文書の生成及び印刷等の処理を示すフローチャートである。

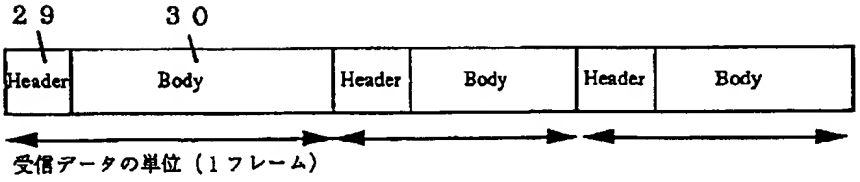
【符号の説明】

１　アンテナ
２　信号分離部
３　映像処理部
４　メディアデータ処理部
５　表示制御部
６　ディスプレイ
７　マイクロプロセッサ（ＭＰＵ）
８　主メモリ
９　入出力インターフェイス回路
１０　描画プロセッサ
１１　表示用メモリ
１２　メディアデータインターフェイス部
１３　外部記憶装置
１４　キーボード
１５　マウス
１６　プリンタ
１７　制御バス
２１　オペレーティングシステム
２２　共通グラフィック部
２３　プロファイルデータ管理部
２４　受信データ監視部
２６　記事管理部
２７　文書整形部
２８　文書管理部

【図１】

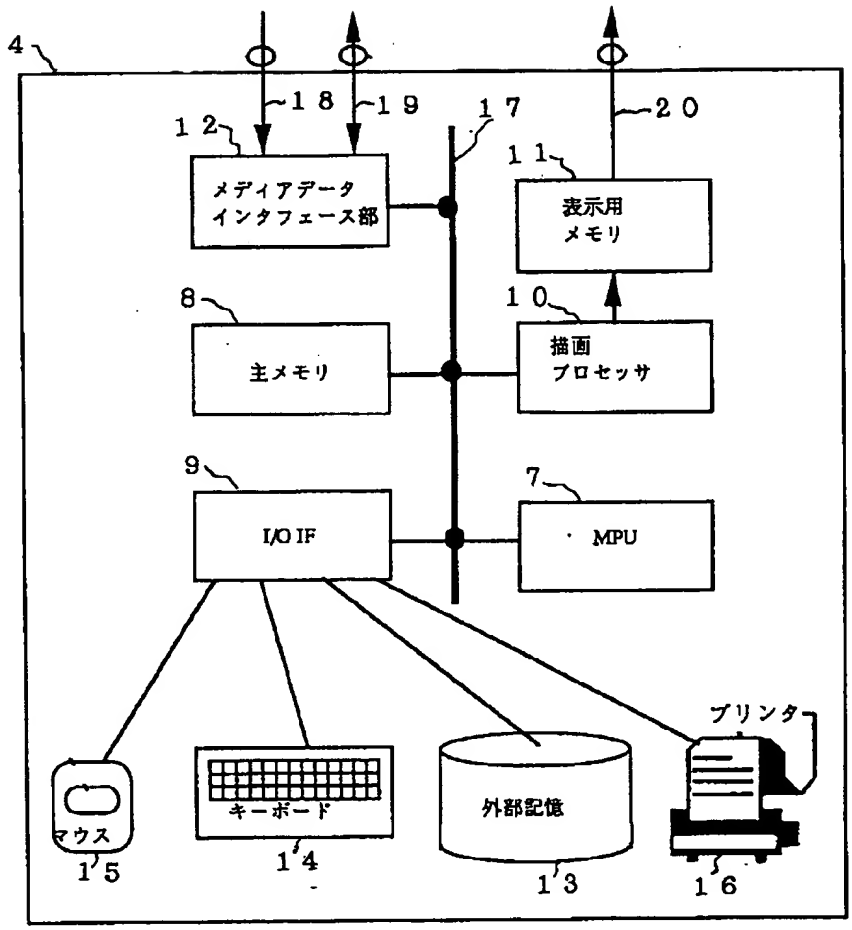

1
アンテナ
2
信号分離部
3
映像処理部
4
メディア
データ処理部
5
表示制御部
6
ディスプレイ

【図４】

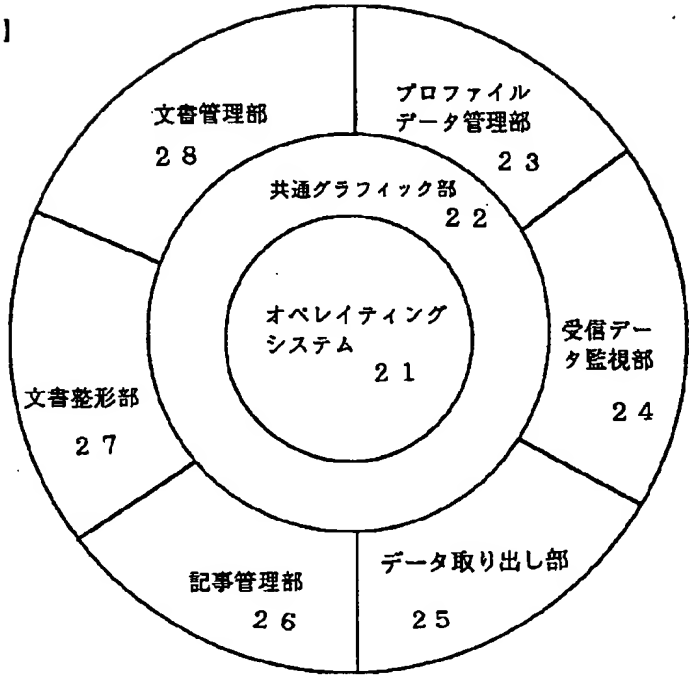

２９
３０
Header
Body
Header
Body
Header
Body
受信データの単位（１フレーム）

【図2】

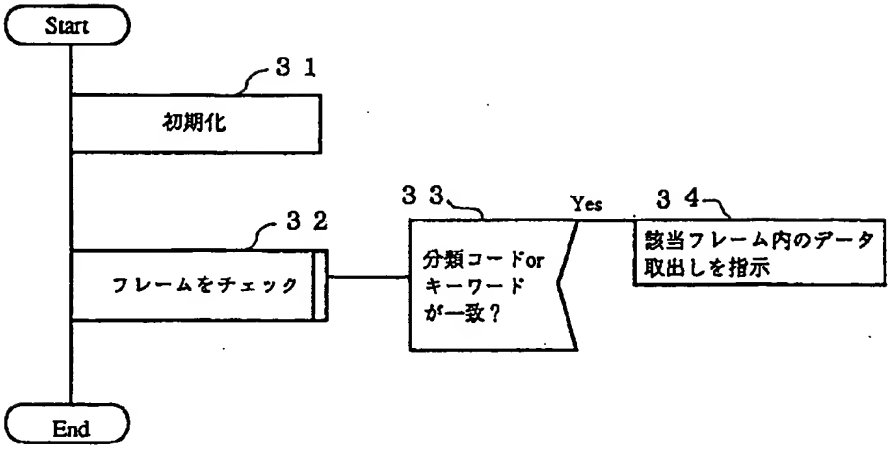
【図2】


4
18
19
17
20
12
11
メディアデータ
インタフェース部
表示用
メモリ
8
10
主メモリ
描画
プロセッサ
9
7
I/O IF
MPU
プリンタ
マウス
15
キーボード
14
外部記憶
13
16

【図3】

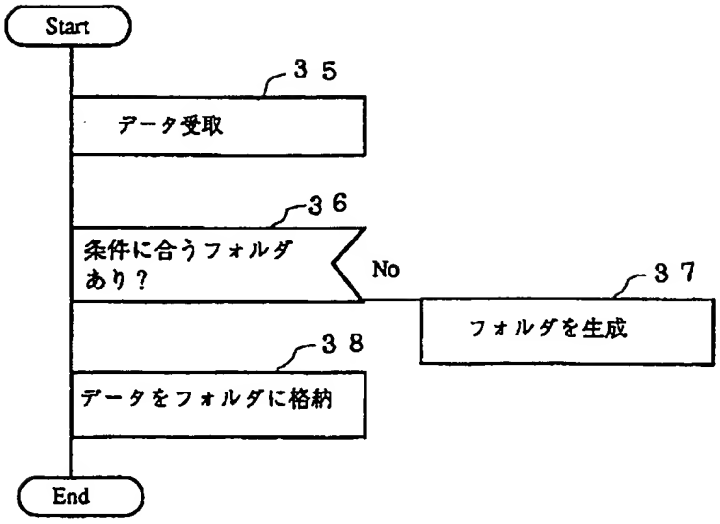

文書管理部
２８
プロファイル
データ管理部
２３
共通グラフィック部
２２
オペレイティング
システム
２１
受信デー
タ監視部
２４
文書整形部
２７
記事管理部
２６
データ取り出し部
２５

【図5】


Start
３１
初期化
３３
Yes
３４
３２
該当フレーム内のデータ
取出しを指示
フレームをチェック
分類コードor
キーワード
が一致？
End

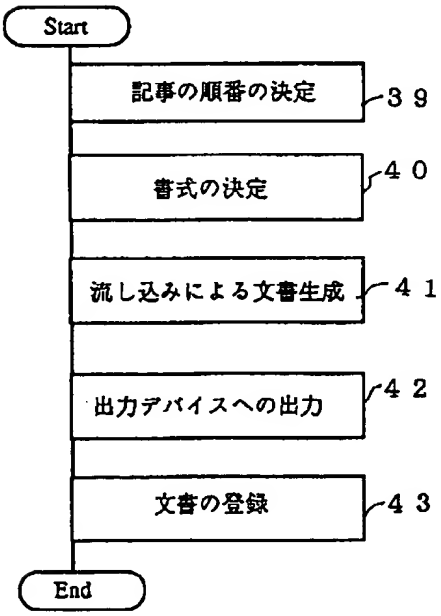
【図6】

【図6】


Start
35
データ受取
36
条件に合うフォルダ
あり？
No
37
フォルダを生成
38
データをフォルダに格納
End

【図7】

【図7】


Start
記事の順番の決定
39
書式の決定
40
流し込みによる文書生成
41
出力デバイスへの出力
42
文書の登録
43
End